7. LAMPIRAN

Lampiran 1. Perhitungan Daya Larut

$$\% \text{ Daya Larut} = \frac{\text{Masa kering setelah dioven x 10}}{\text{massa awal x 5}} \text{ x } 100\%$$

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 20 gram
  - Batch 1

$$\% \text{ Daya Larut} = \frac{\text{Masa kering setelah dioven x 10}}{\text{massa awal x 5}} \text{ x } 100$$

% Daya larut ulangan 1 = $\frac{5,06}{24,34}$ x 100 =20,789%

% Daya larut ulangan 2 = $\frac{5,38}{26,065}$ x 100= 20,641%

% Daya larut ulangan 3 = $\frac{5,06}{25,845}$ x 100= 19,578%

% Daya larut ulangan 4 = $\frac{5,16}{24,98}$ x 100= 20,657%

  - Batch 2

% Daya larut ulangan 1 = $\frac{4,32}{25,38}$ x 100 = 17,021%

% Daya larut ulangan 2 = $\frac{4,04}{23,42}$ x 100 = 17,250%

% Daya larut ulangan 3 = $\frac{4,34}{25,24}$ x 100 = 17,195%

% Daya larut ulangan 4 = $\frac{4,34}{25,195}$ x 100 = 17,226%

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 30 gram
  - Batch 1

$$\% \text{ Daya Larut} = \frac{\text{Masa kering setelah dioven x 10}}{\text{massa awal x 5}} \text{ x } 100$$

% Daya larut ulangan 1 = $\frac{5,42}{25,89}$ x 100 =20,935%

% Daya larut ulangan 2 = $\frac{5,16}{25,005}$ x 100= 20,636%

% Daya larut ulangan 3 = $\frac{5,36}{26,045}$ x 100= 20,580%

% Daya larut ulangan 4 = $\frac{5,06}{23,98}$ x 100= 21,101%

- Batch 2

$$\% \text{ Daya Larut} = \frac{\text{Masa kering setelah dioven x 10}}{\text{massa awal x 5}} \text{ x } 100$$

% Daya larut ulangan 1 = $\frac{4,36}{25,32}$ x 100 =17,220%

% Daya larut ulangan 2 = $\frac{4,38}{25,305}$ x 100= 17,309%

% Daya larut ulangan 3 = $\frac{4,4}{25,315}$ x 100= 17,381%

% Daya larut ulangan 4 = $\frac{4,22}{24,05}$ x 100= 17,547%

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 40 gram
  - Batch 1

$$\% \text{ Daya Larut} = \frac{\text{Masa kering setelah dioven x 10}}{\text{massa awal x 5}} \text{ x } 100$$

% Daya larut ulangan 1 = $\frac{5,4}{25,9}$ x 100 =20,849%

% Daya larut ulangan 2 = $\frac{5,74}{24,73}$ x 100 = 23,211%

% Daya larut ulangan 3 = $\frac{5,78}{25,775}$ x 100 = 22,425%

% Daya larut ulangan 4 = $\frac{5,74}{25,155}$ x 100 = 22,819%

- Batch 2

$$\% \text{ Daya Larut} = \frac{\text{Masa kering setelah dioven x 10}}{\text{massa awal x 5}} \text{ x } 100$$

% Daya larut ulangan 1 = $\frac{4,34}{25,32}$ x 100 =17,141%

% Daya larut ulangan 2 = $\frac{4,36}{24,98}$ x 100 = 17,454%

% Daya larut ulangan 3 = $\frac{4,38}{25,27}$ x 100 = 17,333%

% Daya larut ulangan 4 = $\frac{4,4}{25,025}$ x 100 = 17,582%

Lampiran 2. Perhitungan Daya Serap

$$\% \text{ Daya Serap Air} = \frac{A - B}{C} \times 100$$

Keterangan :

A = Berat sampel dalam tabung setelah disentrifuge

B = Berat tabung kosong

C = Berat sampel awal = 1 gram

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 20 gram
  - Batch 1

% Daya serap air ulangan 1 = $\frac{0,17}{1}$ x 100 =17%

% Daya serap air ulangan 2 = $\frac{0,183}{1}$ x 100 = 18,3%

% Daya serap air ulangan 3 = $\frac{0,221}{1}$ x 100 = 22,1%

  - Batch 2

% Daya serap air ulangan 1 = $\frac{0,196}{1}$ x 100 =19,6%

% Daya serap air ulangan 2 = $\frac{0,191}{1}$ x 100 = 19,2%

% Daya serap air ulangan 3 = $\frac{0,211}{1}$ x 100 = 21,1%

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 30 gram
  - Batch 1

% Daya serap air ulangan 1 = $\frac{0,231}{1}$ x 100 =23,1%

% Daya serap air ulangan 2 = $\frac{0,211}{1}$ x 100 = 21,1%

% Daya serap air ulangan 3 = $\frac{0,19}{1}$ x 100 = 19%

  - Batch 2

% Daya serap air ulangan 1 = $\frac{0,210}{1}$ x 100 =21%

% Daya serap air ulangan 2 = $\frac{0,262}{1}$ x 100 = 26,2%

% Daya serap air ulangan 3 = $\frac{0,243}{1}$ x 100 = 24,3%

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 40 gram
  - Batch 1

% Daya serap air ulangan 1 = $\frac{0,273}{1}$ x 100 =27,3%

% Daya serap air ulangan 2 = $\frac{0,303}{1}$ x 100 = 30,3%

% Daya serap air ulangan 3 = $\frac{0,199}{1}$ x 100 = 19,9%

  - Batch 2

% Daya serap air ulangan 1 = $\frac{0,261}{1}$ x 100 =26,1%

% Daya serap air ulangan 2 = $\frac{0,255}{1}$ x 100 = 25,5%

% Daya serap air ulangan 3 = $\frac{0,277}{1}$ x 100 = 27,7%

Lampiran 3. Perhitungan Higroskopisitasitas

% Higroskopisitasitas = $\frac{M + M1}{\mathrm{M}}$ x 100

Keterangan :

M1 = Massa awal

M = Jumlah air bebas dalam sampel

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 20 gram
  - Batch 1

% Higroskopisitasitas ulangan 1 = $\frac{50,213}{25,237}$ x 100 =1,990%

% Higroskopisitasitas ulangan 2 = $\frac{46,538}{23,393}$ x 100 = 1,989%

% Higroskopisitasitas ulangan 3 = $\frac{64,755}{32,524}$ x 100 = 1,991%

  - Batch 2

% Higroskopisitasitas ulangan 1 = $\frac{55,465}{27,830}$ x 100 =1,993%

% Higroskopisitasitas ulangan 2 = $\frac{46,486}{23,381}$ x 100 = 1,988%

% Higroskopisitasitas ulangan 3 = $\frac{47,335}{23,743}$ x 100 = 1,994%

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 30 gram
  - Batch 1

% Higroskopisitasitas ulangan 1 = $\frac{65,871}{33,004}$ x 100 =1,996%

% Higroskopisitasitas ulangan 2 = $\frac{67,131}{33,644}$ x 100 = 1,995%

% Higroskopisitasitas ulangan 3 = $\frac{58,946}{29,519}$ x 100 = 1,997%

  - Batch 2

% Higroskopisitasitasulangan 1 = $\frac{52,415}{26,269}$ x 100 =1,995%

% Higroskopisitasitasulangan 2 = $\frac{61,645}{30,897}$ x 100 = 1,995%

% Higroskopisitasulangan 3 = $\frac{44,326}{22,206}$ x 100 = 1,996%

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 40 gram
  - Batch 1

% Higroskopisitasulangan 1 = $\frac{84,041}{42,057}$ x 100 =27,3%

% Higroskopisitasulangan 2 = $\frac{88,398}{44,233}$ x 100 = 30,3%

% Higroskopisitasulangan 3 = $\frac{85,944}{43,006}$ x 100 = 19,9%

  - Batch 2

% Higroskopisitasulangan 1 = $\frac{44,679}{22,343}$ x 100 =2%

% Higroskopisitasulangan 2 = $\frac{61,287}{30,645}$ x 100 = 2%

% Higroskopisitasulangan 3 = $\frac{44,130}{22,067}$ x 100 = 2%

Lampiran 4. Perhitungan %inhibisi Aktivitas Antioksidan

% Inhibisi Aktivitas Antioksidan = $1 - \frac{\text{Absorbansi Samepl}}{\text{Absorbansi Blanko}}$ x 100

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 20 gram
  - Batch 1

% Inhibisi Aktivitas Antioksidan ulangan 1 = $1 - \frac{0,2322}{0,7199}$ x 100 =67,746%

% Inhibisi Aktivitas Antioksidan ulangan 2 = $1 - \frac{0,2304}{0,7199}$ x 100 = 67,996%

% Inhibisi Aktivitas Antioksidan ulangan 3 = $1 - \frac{0,2298}{0,7199}$ x 100 = 68,079%

% Inhibisi Aktivitas Antioksidan ulangan 4 = $1 - \frac{0,2255}{0,7199}$ x 100 = 68,676%

  - Batch 2

% Inhibisi Aktivitas Antioksidan ulangan 1 = $1 - \frac{0,2053}{0,7693}$ x 100 =73,313%

% Inhibisi Aktivitas Antioksidan ulangan 2 = $1 - \frac{0,2023}{0,7693}$ x 100 =73,703%

% Inhibisi Aktivitas Antioksidan ulangan 3 = $1 - \frac{0,1875}{0,7693}$ x 100 =75,627%

% Inhibisi Aktivitas Antioksidan ulangan 4 = $1 - \frac{0,1809}{0,7693}$ x 100 = 76,485%

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 30 gram
  - Batch 1

% Inhibisi Aktivitas Antioksidan ulangan 1 = $1 - \frac{0,1811}{0,7199}$ x 100 = 74,844%

% Inhibisi Aktivitas Antioksidan ulangan 2 = $1 - \frac{0,1922}{0,7199}$ x 100 = 73,302%

% Inhibisi Aktivitas Antioksidan ulangan 3 = $1 - \frac{0,2149}{0,7199}$ x 100 = 70,149%

% Inhibisi Aktivitas Antioksidan ulangan 4 = $1 - \frac{0,2171}{0,7199}$ x 100 = 69,843%

  - Batch 2

% Inhibisi Aktivitas Antioksidan ulangan 1 = $1 - \frac{0,1625}{0,7693}$ x 100 =78,877%

% Inhibisi Aktivitas Antioksidan ulangan 2 = $1 - \frac{0,1625}{0,7693}$ x 100 =78,877%

% Inhibisi Aktivitas Antioksidan ulangan 3 = $1 - \frac{0,1594}{0,7693}$ x 100 =79,280%

% Inhibisi Aktivitas Antioksidan ulangan 4 = $1 - \frac{0,1690}{0,7693}$ x 100 = 78,032%

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 40 gram
  - Batch 1

% Inhibisi Aktivitas Antioksidan ulangan 1 = $1 - \frac{0,1463}{0,7199}$ x 100 = 79,678%

% Inhibisi Aktivitas Antioksidan ulangan 2 = $1 - \frac{0,1567}{0,7199}$ x 100 = 78,233%

% Inhibisi Aktivitas Antioksidan ulangan 3 = $1 - \frac{0,1639}{0,7199}$ x 100 = 77,233%

% Inhibisi Aktivitas Antioksidan ulangan 4 = $1 - \frac{0,1703}{0,7199}$ x 100 = 76,344%

  - Batch 2

% Inhibisi Aktivitas Antioksidan ulangan 1 = $1 - \frac{0,1549}{0,7693}$ x 100 =79,865%

% Inhibisi Aktivitas Antioksidan ulangan 2 = $1 - \frac{0,1538}{0,7693}$ x 100 =80,008%

% Inhibisi Aktivitas Antioksidan ulangan 3 = $1 - \frac{0,1521}{0,7693}$ x 100 =80,229%

% Inhibisi Aktivitas Antioksidan ulangan 4 = $1 - \frac{0,1428}{0,7693}$ x 100 = 81,438%

Lampiran 5. Perhitungan Kadar Air

$$\% \text{ kadar air} = \frac{w - (w1 - w2)}{\text{w}} \text{ x } 100$$

Keterangan :

w = bobot sampel awal

w1 = bobot sampel + cawan yang telah dikeringkan

w2 = bobot cawan kosong

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 20 gram
  - Batch 1

% kadar air ulangan 1 = $\frac{2-(26,958-25,052)}{2}$ x 100 =4,7%

% kadar air ulangan 2 = $\frac{2-(30,278-30,359)}{2}$ x 100 = 4,05%

% kadar air ulangan 3 $\frac{2-(27,967-28,061)}{2}$ x 100 = 4,7%

- Batch 2

% kadar air ulangan 1 = $\frac{2-(32,758-30,828)}{2}$ x 100 =3,5%

% kadar air ulangan 2 = $\frac{2-(32,379-30,461)}{2}$ x 100 =4,1%

% kadar air ulangan 3 = $\frac{2-(31,828-29,908)}{2}$ x 100 =4

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 30 gram
  - Batch 1

% kadar air ulangan 1 = $\frac{2-(45,53-45,603)}{2}$ x 100 =3,65%

% kadar air ulangan 2 = $\frac{2-(30,699-30,761)}{2}$ x 100 =3,1%

% kadar air ulangan 3 = $\frac{2-(30,45-30,52)}{2}$ x 100 =3,5%

  - Batch 2

% kadar air ulangan 1 = $\frac{2-(30,699-28,764)}{2}$ x 100 =3,25%

% kadar air ulangan 2 = $\frac{2-(36,121-34,185)}{2}$ x 100 =3,2%

% kadar air ulangan 3 = $\frac{2-(33,953-32,02)}{2}$ x 100 =3,35%

- Serbuk ekstrak etanol daunn dandang gendis dengan penambahan enkapsulat *gum*arab 40 gram
  - Batch 1

% kadar air ulangan 1 = $\frac{2-(26,,9-26,96)}{2}$ x 100 =3%

% kadar air ulangan 2 = $\frac{2-(29,085-29,129)}{2}$ x 100 =2,2%

% kadar air ulangan 3 = $\frac{2-(25,39-25,44)}{2}$ x 100 =2,5%

  - Batch 2

% kadar air ulangan 1 = $\frac{2-(31,996-30,056)}{2}$ x 100 =3%

% kadar air ulangan 2 = $\frac{2-(34,646-32,7)}{2}$ x 100 =2,7%

% kadar air ulangan 3 = $\frac{2-(31{,}843-29{,}91)}{2}$ x 100 = 3,35%

Lampiran 6. Hasil Pengolahan SPSS

- Analisis Kimia

➢ Uji Duncan Kadar Air

KADAR_AIR

Duncan

KONSENTR...	N	Subset for alpha = 0.05		
		1	2	3
40%	6	2.7917		
30%	6		3.3417	
20%	6			4.1750
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

➢ Uji Duncan Antioksidan

ANTIOKSIDAN

Duncan

KONSENTR...	N	Subset for alpha = 0.05		
		1	2	3
20%	8	71.4531		
30%	8		75.4005	
40%	8			79.1285
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

➢ Uji Duncan Aw (water activity)

AW

Duncan

KONSENTR...	N	Subset for alpha = 0.05		
		1	2	3
40%	8	.1486		
30%	8		.1611	
20%	8			.2121
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

- Analisis Fisik

➢ Uji Duncan Daya Larut

DAYA_LARUT

Duncan

KONSENTRASI	N	Subset for alpha = 0.05
		1
20%	8	18.7946
30%	8	19.0886
40%	8	19.8518
Sig.		.367

Means for groups in homogeneous subsets are displayed.

- Uji Duncan Daya Serap Air

DAYA_SERAP

Duncan

KONSENTR...	N	Subset for alpha = 0.05	
		1	2
20%	6	19.5500	
30%	6	22.4500	
40%	6		26.1333
Sig.		.085	1.000

Means for groups in homogeneous subsets are displayed.

- Uji Duncan Pembasahan

PEMBASAHAN

Duncan

KONSENTR...	N	Subset for alpha = 0.05		
		1	2	3
20%	8	14.1250		
30%	8		25.2875	
40%	8			34.1625
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

- Uji Duncan Higroskopisitas

HIGROSKOPIS

Duncan

KONSENTR...	N	Subset for alpha = 0.05		
		1	2	3
20%	6	1.9908		
30%	6		1.9957	
40%	6			1.9990
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

- Uji Duncan Warna L*

warna_L

Duncan

KONSENTR...	N	Subset for alpha = 0.05		
		1	2	3
20%	6	48.1850		
30%	6		60.0467	
40%	6			61.8583
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

- Uji Duncan Warna a*

warna_a

Duncan

KONSENTR...	N	Subset for alpha = 0.05		
		1	2	3
20%	6	-7.3917		
30%	6		-6.5283	
40%	6			-5.9717
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

- Uji Duncan Warna b*

warna_b

Duncan

KONSENTR...	N	Subset for alpha = 0.05		
		1	2	3
20%	6	11.2850		
30%	6		12.1733	
40%	6			13.2967
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Lampiran 7. Dokumentasi produk serbuk ekstrak etanol daun dandang gendis